

CLAIMS

- 1 1. A system for determining and displaying icons representing text files,
2 comprising:
3
4 a content extractor for determining the content of all or parts of a text file by
5 examining words in the file;
6
7 a means for associating the content with an icon;
8
9 a selector for selecting an icon to represent the text file or portion of a file on the basis
10 of the determined content of the text file; and
11
12 a display for displaying the selected icons to represent the text file.
- 1 2. A system according to Claim 1, wherein the selector includes means for
2 selecting the closest one of a group of available icons to represent the text file.
- 1 3. A system according to Claim 1, wherein the content extractor includes means
2 for determining several topic icons for the text file.
- 1 4. A system according to Claim 3, wherein the topic icons form a composite icon
2 associated with a different parts of the text file.
- 1 5. A system according to Claim 3, wherein the several icons are sensed by
2 different senses.
- 1 6. A system according to Claim 1, wherein the icons facilitate use of a computer
2 by people with various disabilities.

1 7. A system for representing contents of computer files via icons, the system
 2 comprising:
 3
 4 a computer memory including a group of directories with lists of files;
 5
 6 a semantic content extractor for extracting information and content from the files; and
 7
 8 a module for creating icons representing the files on the basis of the information and
 9 content extracted by the semantic content extractor.

1 8. A system according to Claim 7, wherein the semantic content extractor
 2 includes:
 3
 4 a module that associates with a text file a language model, and word, key words and
 5 key phrases counts;
 6
 7 a topic identifier that uses the language model and counts to identify a topic; and
 8
 9 a module that partitions a text in a file by topic count.

1 9. A system according to Claim 8, wherein the topic identifier uses likelihood
 2 ratio to partition texts in parts by topics; likelihood in this ratio are defined by using
 3 probabilities of words from language models of the text in a file and language models
 4 for various topics that are stored in the database.

1 10. A method for creating a composite icon to allow greater access to computer
 2 files, comprising the steps of:
 3
 4 using a file topic identification to perform segmentation and topic classification; and
 5

6 using a file topic divider to divide the files into parts using segmentation and topic
7 classification from the file topic identification.

1 11. An icon creator for creating an icon representing a file, comprising:
2
3 a semantic content extractor for identifying the importance and significance of topics
4 associated with the file; and
5
6 a matcher to create a match of data and images to create an icon using a database of
7 images and a database of icons; and
8
9 wherein each icon has an index attachment, which opens directly to the file.

1 12. An icon creator according to Claim 11, wherein a blind person can use a sound
2 icon using the database of sound icons; this would enable the blind user to use their
3 sense of hearing to choose the file they wish to open.

1 13. An icon creator according to Claim 11, further comprising means to allow a
2 person with a reading disability to use the icon system, including a group of files that
3 are formed into an icon attachment; the user then chooses an icon, using the pictures
4 or sounds and the user can then use a speech synthesizer can listen to a file.

1 14. An icon creator according to Claim 11, wherein composite icons contain
2 multiple topics such as cars and travel, and dealerships, the larger part of the file
3 shows cars, the smaller part of the file shows travel; the middle sized part of the file
4 shows dealerships; and further comprising means to contain an index which lists
5 information on cars or building, means to show where the information on cars is placed
6 in the file; and wherein, using a fraction method, the files can be broken down.

1 15. A method for creating icons, comprising:
2

3 generating a list of files;
4
5 reading the content of each file;
6
7 attaching topics to each file;
8
9 generating icons for the files;
10
11 if several topics, creating a composite icon containing many topics;
12
13 creating an index of topics;
14
15 printing a list of icons near file names; and
16
17 creating a list of icons to list files.

1 16. A method of determining and displaying icons representing files containing
2 text, the method comprising the steps of:
3
4 determining the content of a file by examining words in the file;
5
6 searching a database of icons;
7
8 on the basis of the determined content of the file, selecting one of the icons in the
9 database to represent the file; and
10
11 displaying the selected icon to represent the file.

1 17. A method according to Claim 16, wherein in the database, each icon is
2 associated with words, and wherein:
3

4 the determining step includes the step of using a semantic content extractor to identify
5 the importance and significance of topics associated with the file; and
6
7 the selecting step includes the step of comparing said topics with the words in the
8 database to select one of the icons to represent the file.

1 18. A program storage device readable by machine, tangibly embodying a program
2 of instructions executable by the machine to perform method steps for determining
3 and displaying icons representing files containing text, said method steps comprising:
4
5 determining the content of a file by examining words in the file;
6
7 searching a database of icons;
8
9 on the basis of the determined content of the file, selecting one of the icons in the
10 database to represent the file; and
11
12 displaying the selected icon to represent the file.

1 19. A program storage device according to Claim 18, wherein in the database, each
2 icon is associated with words, and wherein:
3
4 the determining step includes the step of using a semantic content extractor to identify
5 the importance and significance of topics associated with the file; and
6
7 the selecting step includes the step of comparing said topics with the words in the
8 database to select one of the icons to represent the file.

1 20. The system in claim 1, where the icons contain advertisements, which may be
2 hyperlinks.

1 21. The system in claim 20 where users pay less for the system if ads are included.

1 22. The system in claim 20 where advertiser pays manufacturer or seller of system.

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